Work Ord September-11-1				*10F	\$77 0 *							Page 1
Item ID: Revision ID: Item Name:	D3016-041 Seat Frame Ass	sembly		Accept	*N900	040	100)*	Setup	Start Stop	*N:	S1* S2*
Start Date: Required Date: Reference:	9/11/13 : 9/11/13	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item II Customer:	D:						. , ,
Approvals:	Process Plan	n:	Date:/ <i>3-04-/L</i>	Tooling: SPC (Y/N):		ite:			Run	Start Stop	*NI *N	R1* R2*
Sequence ID/ Work Center I		Operation Description	//	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	t Rej Qty		Reject Number	Insp. Stamp
Draw Nbr	Revi	sion Nbr										
D3016	Rev	A / DEO A-1										
100		Weld per dwg A/R 413 Large Fab	0 rod Batch: <u>M// 8</u> 7	0.00				/		Z	13-10-	-2
Large Fab Large Fab		2-Deburr 3-Assemble DT8597	tubes, fittings and weld as parill holes from D3017-041									
		5- Assemble	brackets and gusset per dw	g and weld								

110

QC9- Inspect visual per QSI004- Fusion Welds

0.00

*11**0***

Memo

0.00

Quality Control

00 13.10.00 DAG

											DQA:	Date:	
NCR:	Yes /	No				WORK ORDER NON-	COI	NFORM	MANCE / UP	DATE			
											QA Closed:	Date:	
Work Orde	or.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N						Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	-	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		Initial	Act	ion	Sign &		
Cause	D	ate	Step	Qty		or Non-conformance	Cł	nief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator							1						
Material							1					1	
Setup													
Other							l					·	
Process			:				İ						
Supplier							ł						
Training							ł					•	
Unapproved													
						F	AUI	LT CATE	GORY				
Landi	ng Gear					General		_			_		_
	Ben	ding				Bend		Grain			Ovalized		Pressure/Forced
	Cen	tre No	t Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cra	cks				Broken/Damaged		Inspection	on Incomplete		Part Incorre	ct	Weld
	Cru	shed/C	Crimped			Burrs		Instructi	ons Incomplete/U	Inclear	Part Lost/M	issing	Wrong Stock Pulled
	Cuf	fs				Contamination		Mainte	nance		Part Moved		_
	Hea	t Trea	t			Countersink		Mislabel	led		Positioned V	Vrong	_
	Insp	ection	Strip in	Tube		Cut Too Short		Misread			Power Loss/	Surge	Other
	Rip	ples in	Bend			Drill Holes		Offset			_		

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing .

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Ordenserver 11-1.				*106	3770*							Page 2
Item ID: Revision ID:	D3016-041			Accept	*N900	040	100)*	Setup	Start	*N.	S1*
Item Name:	Seat Frame	Assembly								Stop	*N.	S2*
Start Date: Required Date: Reference:	9/11/13	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*	·	Cust Item I Customer:	D:						
Approvals:	Process P	lan:	Date:	Tooling:	Dε	nte:		·	Run	Start	17	R1*
	QC:		Date:	_ SPC (Y/N):	Da	ıte:				Stop	*N	R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	t Re		Reject Number	Insp. Stamp
120		QC5- Inspect part compl	eteness to step on W/O	0.00								o'Ao
120									0	13	10.05	09
QC Quality Control		Memo		0.00								&-89
130		Grey Sandtex(Ref:4.3.5.0	6) per QS1005 4.3	0.00				i			,	i /
130			_	0.00				LXy	24	MI	/13	//0/0/
Powder Coating	۸	Memo Install paint	screws on fitting ends			÷					/	
Powder Coating 140	26	START TIM	1E: 32 IPERATURE: 32	J 7 /-								·
140		QC3- Inspect Part Finish	3/33	0.00							,	
140		QC3- mspect rait rimsi	ı	0.00				1 %	16) [4	2 50	שלים

0.00

Memo

140

Quality Control

1 \$ 13.10-3. 200

NCR:	res	/ No				WORK ORDER NON-C	O	NFORI	MANCE / UPI	DATE			
								_			QA Closed:	Date	:
Work Orde	er: _					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N	_					Rework Scrap Use-as-is Work Order Update		Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		Initial	Act	ion	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling	Ц				i								
Operator													
Material	Ц						ŀ						
Setup											}		
Other	Ш												
Process	Ц						ŀ						
Supplier	Ц												
Training	\dashv								,				
Unapproved	į												
t d!						· · · · · · · · · · · · · · · · · · ·	AUL	T CATE	GORY				
Landi		ear Bending				General Bend	F	Grain		<u> </u>	Ovalized	Г	Pressure/Forced
	_	Sending Centre No	t Conco	atric to 1	_/s	BOM/Route	-	Hardwa	r.0	<u> </u>	Ovalized Over/Under	+alaranaa	
	\vdash	Cracks	it Concer	itiic to v	^{5/3} -	Broken/Damaged	-	ł	on Incomplete	 	Part Incorrec		Temperature/Cure Weld
	-	Crushed/0	rimped		—	Burrs	┢	1	ions Incomplete/L	Inclose	Part Lost/Mi) —	Wrong Stock Pulled
	—	Cuffs	cimpeu		-	Contamination		Mainte	•		Part Moved	23111B	
	⊢	Heat Trea	t			Countersink	\vdash	Mislabe		<u> </u>	Positioned W	Irong	
	↤	nspection		Tube	 	Cut Too Short	<u> </u>	Misread		}	Power Loss/S		Other
	_	Ripples in			<u> </u>	Drill Holes	\vdash	Offset	•	<u> </u>	1. 01101 2033/.		Tourer
	—			xtrusio	, H	Drawing	\vdash	ł	Calibration				
	Torque Waves in Extrusion Drawing Turning Sequence Finish				\vdash	1	equence						

Outside Dimensions

DQA:

Date:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube

Work Ord September-11-1				*106	3770*							Page 3	
Item ID: Revision ID: Item Name:	D3016-041 Seat Frame As	ssembly		Accept	*N900	<u>040</u>	100)*	Setup	Start Stop	I VI	S1* S2*	
Start Date: Required Date: Reference:	9/11/13 : 9/11/13	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item I Customer:	D:							
Approvals:	Process Pla	nn:	Date:	Tooling: _ SPC (Y/N):		nte:			Run	Start Stop	171	R1* R2*	
Sequence ID/ Work Center I 150 *150* Packaging Packaging	D	Operation Description Identify as per dwg & St Memo	ock Location 6 A	Set Up/ Run Hours 0.00	Tool ID	Tool#	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp	lo
160 *160* QC Quality Control	·	QC21- Final Inspection Memo	- Work Order Release	0.00				•	\mathcal{A}	' /		16-3	
									\	NB	103		

											DQA:	Date	
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORI	MANCE / UPDATE		QA Closed:	Date	•
						DISPOSITION			AGA	INST DE	PARTMENT		
Work Ord Part I NCR I	No.					Rework Scrap Use-as-is Work Order Update		1	Skid-tube Cross Machining Small	tube Fab hing	Pro	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root		4.7			Descri	ption of work order update		Initial	Action		Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ct	nief Eng	Description		Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process													
Supplier									,				
Training Unapproved					:	· ·							
				<u> </u>		· F	AUL	T CATE	GORY		1		<u> </u>
Landi	ng G	iear				General							
		Bending Centre No Cracks Crushed/ Cuffs			o/s	Bend BOM/Route Broken/Damaged Burrs Contamination		-	on Incomplete ions Incomplete/Unclear		Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved	t E	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled
		Heat Trea	at ·			Countersink		Mislabe	led		Positioned V	/rong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Power Loss/Surge

Other

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

Picklist Print

September-11-13 11:40:49 AM

Page 1/2

Work Order ID:

106770

Parent Item:

D3016-041

Parent Item Name:

Seat Frame Assembly

Start Date: 9/11/13

Required Date: 9/11/13

Start Qty: 1.00

Required Qty: 1.00

	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on e Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M4130NT0.750W.049		Purchased	No		·	100	f	167.6682	4.3	4.526315	8		
4130 RD Tube .750 x.049W			11							EZ 13	16-1		W
•				Location		Loc Oty	<u>.</u>	oc Code					
				MAT033		167.6681893				·			
				. 12333		2.1217893				· ·			•
•				12525	-	29.3164 136.23				1./6 S	<i>'</i> 0"	4	
M4130NT0.500W.049		Donahasad	No	12331	13	100	f	55.0860	4.3		(Q ·		
4130 RD Tube .500 x.049W		Purchased	140					33.0000		4.526315 <i>CZ</i>	73.10	-/	
1130 100 1000 1300 110 17 11				<u>Location</u>		Loc Qty		oc Code				1	
			•	MAT032		55.086	-						
				12102	25	1.82				<u>.</u>			
			. •	12333		33.556			4.16 #	4	50"		
				12429	93	19.71				<u> </u>			
M4130NT1.000W.120		Purchased	No			100	f .	33.4825	1.5	1.578947	4 3-10-1	,	
4130 RD Tube 1.00 x .120w	all .						٠.				9-10-1		
	•			Location		Loc Oty	. <u>I</u>	oc Code					
				MAT033		33.4825				.			
		MIL	7656	/ 7. 5 12429 m126	93	9.71 23.7725				 .			
D3016-17			No	7. 3 m120		100	Each	0.0000	2.				
Gusset		Manufactured		748x8		100	Laci	0.0000		a *	13-10-1	,	
D3016-13		Manufactured	No	17/20		100	Each	15.0000	2	2			
Bracket		Manufactured								_E\/	13-10-1		
				Location		Loc Qty	I	oc Code					
•	•			WA001		14	_						
				10081		14				9			

92380

										DQA:	Date:	
NCR: Y	es / No				WORK ORDER NON-O	COI	NFORM	/ANCE / UP	DATE			
										QA Closed:	Date:	
Work Orde	a r.				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
WOIR OIGC	-1.			 .	Rework	1		Skid-tube	Crosstube	1	Water Jet	Engineering
Part N	lo.				Scrap	1	•	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
					Use-as-is		Therm	noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR N	lo				Work Order Update]		Large Fab	Composite		Supplier	
Root				Descri	ption of work order update		Initial	Ac	tion	Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Cł	nief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling						ļ						
Operator									,			,
Material		1										
Setup			·			1						
Other			1									
Process [1									
Supplier					·							•
Training												
Unapproved						-						
					F	AUI	LT CATE	GORY				
Landir	ng Gear				General		_			_		
	Bending				Bend		Grain			Ovalized		Pressure/Forced
	Centre N	lot Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct ·	Weld
	Crushed	/Crimped			Burrs		Instructi	ons Incomplete/	Unclear	Part Lost/M	issing	Wrong Stock Pulled
[Cuffs				Contamination		Mainte	nance		Part Moved		_
	Heat Tre	at			Countersink		Mislabe	led		Positioned \	Vrong	
	Inspection	on Strip in	Tube		Cut Too Short		Misread			Power Loss/	Surge	Other
	Ripples i	n Bend			Drill Holes		Offset		<u> </u>	_		

Out of Calibration

Out of Sequence

Outside Dimensions

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Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

September-11-13 11:40:49 AM

Work Order ID:	106770			
Parent Item:	D3016-041		Start	Date: 9/11/13 Required Date: 9/11/13
Parent Item Name:	Seat Frame Assembly		Start	Qty: 1.00 Required Qty: 1.00
D3016-15 Gusset	Manufactured	No	100 Each 17.0000	² B ² /3-/67
		Location	Loc Qty Loc Code	
		WA 97657	13 13	
		WA001	3 3	
		WA002 90616	1 1	
D3020-1 Fitting	Manufactured	No	100 Each 13.0000	4 R 4/3./0-/
		Location	Loc Oty Loc Code	
		WA 100923	13 13	<u> </u>

										DQA:	Dat	e:
NCR:	res / No				WORK ORDER NON-	COI	NFORI	MANCE / UP	DATE	QA Closed:	Dat	٥٠
					DISPOSITION				A CAINCE DE		······	с.
Work Orde	er:				DISPOSITION				AGAINST DE	PARTIVIENT	PROCESS	
Part N				, he salet	Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	T	Initial	Act	tion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Ch	nief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator												
Material										İ		
Setup												
Other												
Process		İ										•
Supplier												
Training												
Unapproved					<u></u>	<u> </u>			•			
						AUL	T CATE	GORY			 	
Landii	ng Gear			<u> </u>	General	_	1			1	Г	
	Bending			_	Bend	 	Grain		<u> </u>	Ovalized		Pressure/Forced
		ot Conce	ntric to	^{0/S}	BOM/Route	-	Hardwa			Over/Under		Temperature/Cure
	Cracks	1 0 : 1			Broken/Damaged	-	4 '	on Incomplete	<u> </u>	Part Incorred		Weld
		'Crimped		-	Burrs	-	1	ions Incomplete/U	Unclear	Part Lost/Mi	ssing [Wrong Stock Pulled
	Cuffs	_4		-	Contamination	_	Mainte		<u> </u>	Part Moved	t	
	Heat Tre		Tula	-	Countersink	\vdash	Mislabe		-	Positioned W	· ·	
	Inspectio		rupe	<u> </u>	Cut Too Short	-	Misread	l		Power Loss/	ourge [Other
	Ripples in Bend			Drill Holes	-	Offset	S-116			<u> </u>		
	Iorque V	que Waves in Extrusion			Drawing	1	JOut of C	Calibration				

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G





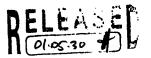
	DESIG	v cp	DRAWN BY	DART AEROSPACE HAWKESBURY, ONTARIO, CANAI	
	CHECK	(ED 🚜	APPROVED	DRAWING NO.	REV. A
ļ		#	#	D3016	SHEET 1 OF 3
	DATE			TITLE	SCALE
	01.0)5.18		SEAT FRAME ASSEMBLY	NTS
	Α		01.05.18	NEW ISSUE	

QTY	PART NUMBER	DESCRIPTION	MATERIAL
Х	D3016-041	SEAT FRAME ASSEMBLY	N/A
1	D3016-1	TUBE	AISI 4130N TUBE, Ø0.75 DIA x 0.049 WALL (M4130N-T0750W049)
2	D3016-3	TUBE	AISI 4130N TUBE, Ø0.75 DIA x 0.049 WALL (M4130N-T0750W049)
1	D3016-5	TUBE	AISI 4130N TUBE, Ø0.50 DIA x 0.049 WALL (M4130N-T0500W049)
2	D3016-7	TUBE	AISI 4130N TUBE, Ø0.50 DIA x 0.049 WALL (M4130N-T0500W049)
1	D3016-9	SADDLE	AISI 4130N TUBE, Ø1.00 DIA x 0.120 WALL (M4130N-T1000W120)
1	D3016-11	SADDLE	AISI 4130N TUBE, Ø1.00 DIA x 0.120 WALL (M4130N-T1000W120)
1	D3016-13	BRACKET	AISI 4130N SHEET, 18 GAUGE (M4130N-S049)
1	D3016-15	GUSSET	AISI 4130N SHEET, 18 GAUGE (M4130N-S049)
1	D3016-17	GUSSET	AISI 4130N SHEET, 18 GAUGE (M4130N-S049)
_ 2	D3020-1	FITTING	N/A

NOTES

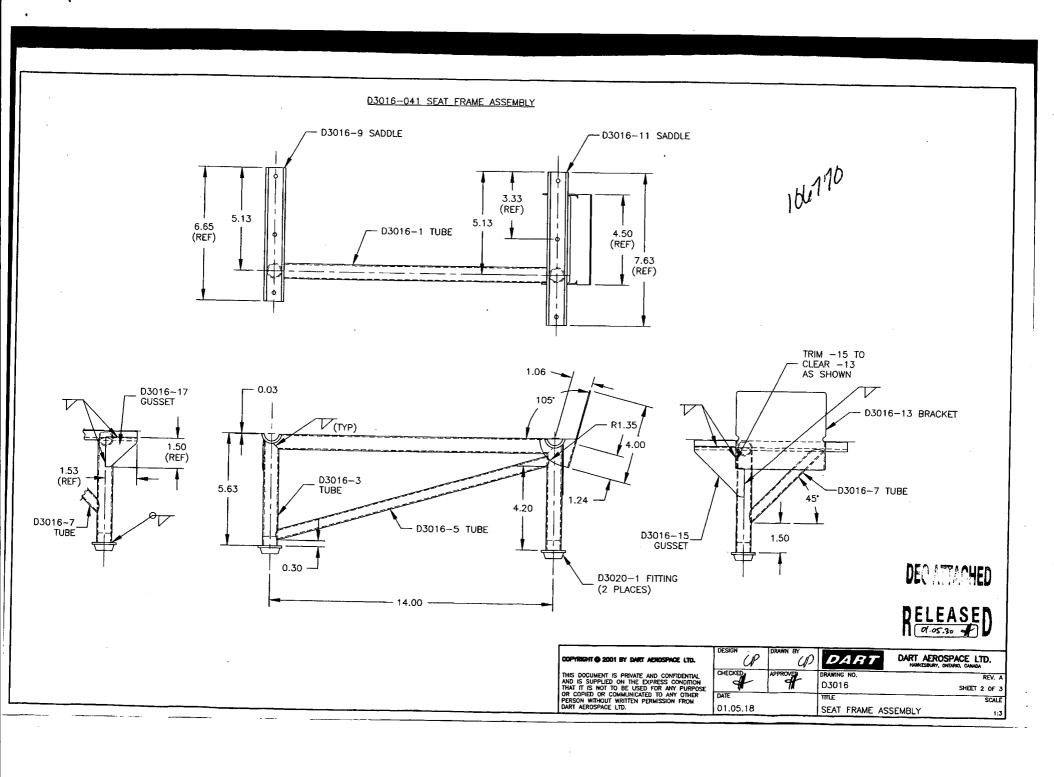
- 1) WELD PER DART QSI 004
- 2) ON SHEET METAL PARTS, BREAK ALL UNMARKED CORNERS 0.020-0.040
- FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

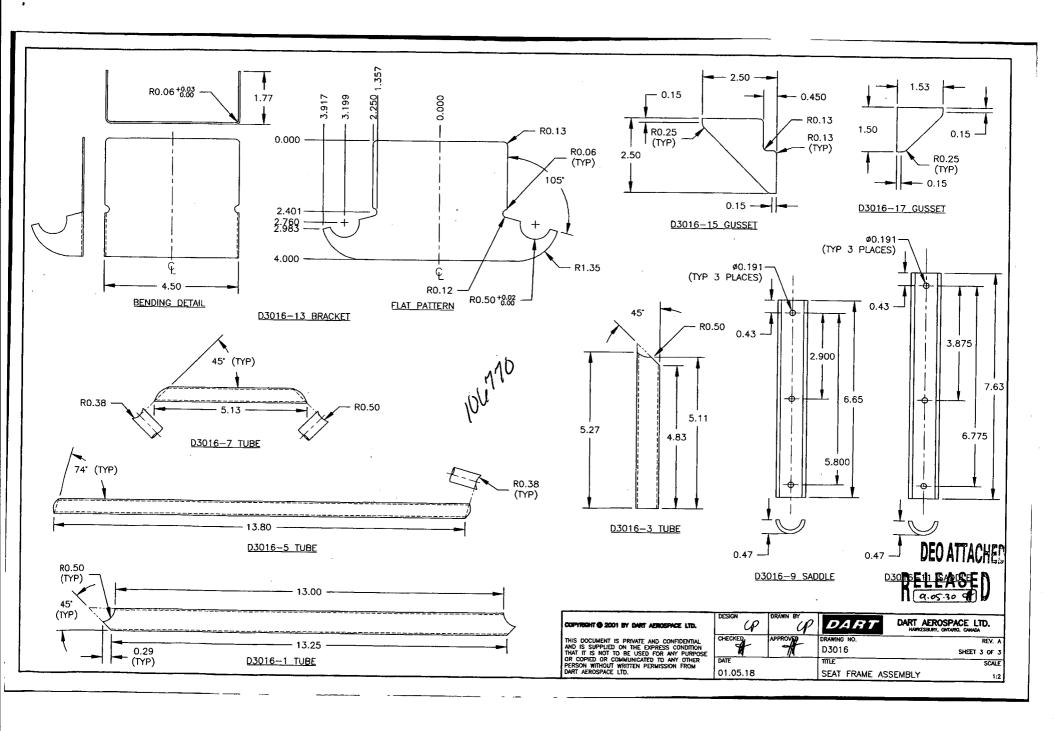
DEO ATTACHED



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DRAWING NO. D3016	TITLE	REV. A	DART AEROSPAC		SHEET NO.	SCALE
DRAWN #	SEAT FRAME ASSEMBL	1/2	MFG. APPR.		SHEET 1 OF 1	NTS
DATE 10.01.	20	2.01.25	1 20	APPROVED AFF	DE APPR. ———————————————————————————————————	

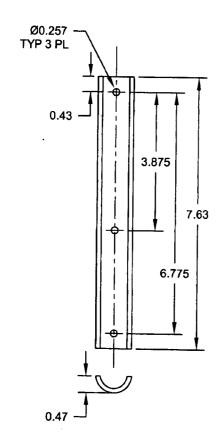
PURPOSE:

TO REVISE D3016-11 SADDLE'S HOLE SIZES

CHANGE:

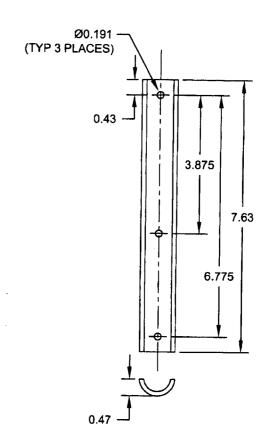
DETAIL D3016-11 SADDLE (SHEET 3): Ø0.257 TYP 3 PL WAS Ø0.191 (TYP 3 PLACES) AS SHOWN:

IS:



D3016-11 SADDLE

WAS:



D3016-11 SADDLE

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